Evaluating a population health approach to statin use: pharmacist driven interventions in patients with type 2 diabetes mellitus

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TAP TO RETURN TO KIOSK MENU

Introduction:

- **Background:**
  - In the context of value-based healthcare, statin therapy in primary prevention patients with diabetes, age 40-75 years of age, is a quality metric with strong evidence supporting its value.
  - A common population health initiative to address potential gaps in care is prospectively identifying these patients who are not on statin therapy and implementing strategies that result in initiation of statin therapy.
  - Many studies have shown that pharmacist managed services increase statin initiation rates; however, limited data have compared the effectiveness of different population health approaches targeting initiation of statin therapy in this population.
- **Purpose**:
  - To compare statin initiation rates with a population health initiative among 4 University of Colorado Health primary care clinics with embedded clinical pharmacists to 5 University of Colorado Health clinics with non-embedded clinical pharmacists.
- **Evidence-based guideline recommendations:**
  - **2013 ACC/AHA Guideline**
    - Moderate-intensity statin for patients with diabetes (Class I, Level A)
    - Consider high-intensity statin for patients with diabetes who have a 10 year ASCVD risk >/= 7.5% (Class IIa, Level B)
  - **2018 AHA/ACC/Multi-Organization Guideline**
    - Moderate-intensity statin for patients with diabetes (Class I, Level A)
    - Consider high-intensity statin for patients with diabetes and multiple ASCVD risk factors (Class IIa, Level B-R)

Abstract ID: 320
The authors have no conflicts of interest to disclose

Methods:

- **Design:** retrospective cohort analysis comparing cohorts with embedded versus non-embedded clinical pharmacists using two different approaches to increase statin utilization.
- **Primary outcome:** rate of prescribing a statin after statin therapy was recommended by a clinical pharmacist in patients with T2DM, an LDL-C between 70-189 mg/dL, and a lack of an active prescription for a statin.
- **Inclusion criteria**: 1) T2DM, 2) age 40-75 years, 3) LDL-C 70-189 mg/dL, and 4) no active statin prescription through electronic health record (EHR) registries.
- **Cohorts**
  - **Embedded:** patients attributed to 4 UCHealth clinics with embedded clinical pharmacists (interprofessional model within the primary care clinic)
    - Utilized **Approach A** (written EHR recommendation within 7 days prior to an upcoming office visit using standardized template).
  - **Non-embedded:** patients attributed to 5 UCHealth clinics with centrally-located clinical pharmacists.
    - Utilized both **Approach A** and **Approach B** (provision of a list of pre-reviewed patients for whom the clinical pharmacist recommended statin therapy. Providers could indicate approval and the pharmacist then performed telephone outreach to initiate therapy).
- **Review period:** March 1, 2018 to November 10, 2018 (the time between starting the initiative and the publication of the 2018 AHA/ACC/Multi-Organization Guideline).
- Based on the a priori sample size calculation, 136 patients in each cohort are needed to detect an absolute difference in statin prescribing rate of 15%. We reviewed 200 patients in each cohort (N= 400).
- Data were analyzed using a Chi-square test, with p-values <0.05 identified as statistically significant.

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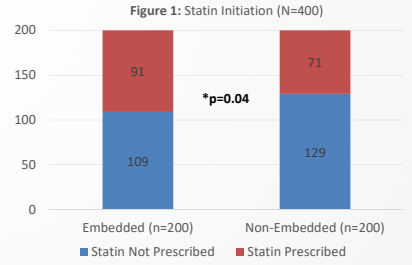
Results:

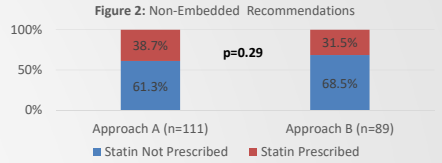
- Clinical pharmacists recommended statin therapy for 870 patients between March 1, 2018 and November 10, 2018. A total of 400 patients were assessed in this analysis.
- Demographics (Table 1):

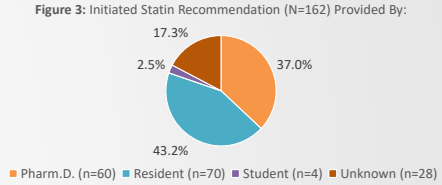
Characteristic	Embedded	Non-Embedded	TOTAL
Average Age ± SD (years)	57.1 ± 10.8	61.5 ± 9.0	59.1 ± 10.3
Female Sex (%)	63.7	52.0	58.4

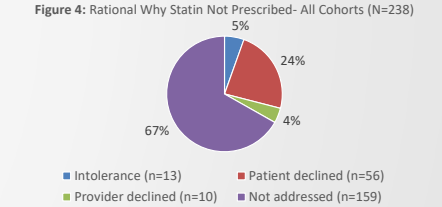
- Statin therapy was initiated in 45.5% and 35.5% of patients in the embedded and non-embedded cohorts, respectively (p=0.04) (Figure 1).



- In the embedded cohort, all recommendations were made using approach A (EHR note prior to office visit).
- In the non-embedded cohort, a combination of approach A and approach B was utilized (Figure 2).
- Accepted statin recommendations were written mainly by clinical pharmacists and residents (Figure 3).
- Patient declination was the leading reason for not initiating therapy among patients where rational for why statin therapy not initiated was assessed (Figure 4).







Conclusions:

- This clinical pharmacist population health initiative increased the rate of statin prescribing in eligible patents with T2DM.
- Both embedded and non-embedded clinical pharmacists models were successful; however, **embedded clinical pharmacists significantly increased statin initiation rates compared to non-embedded clinical pharmacists**
- Population health approaches that target eligible patients for statin therapy prior to their next office visit may be more effective than prospectively evaluating an entire patient panel.

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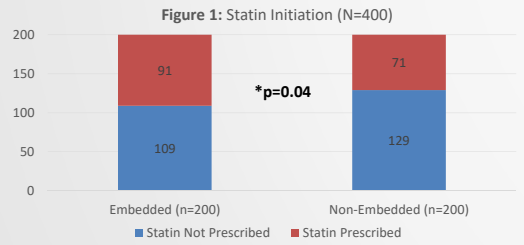

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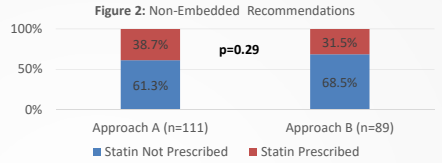

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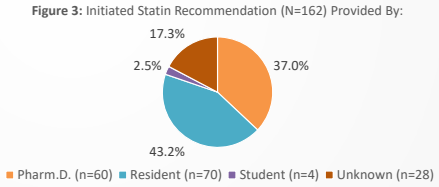

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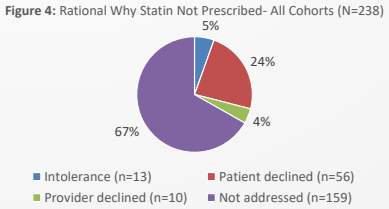

Tap figures to zoom

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Figure 1: Statin Initiation (N=400)

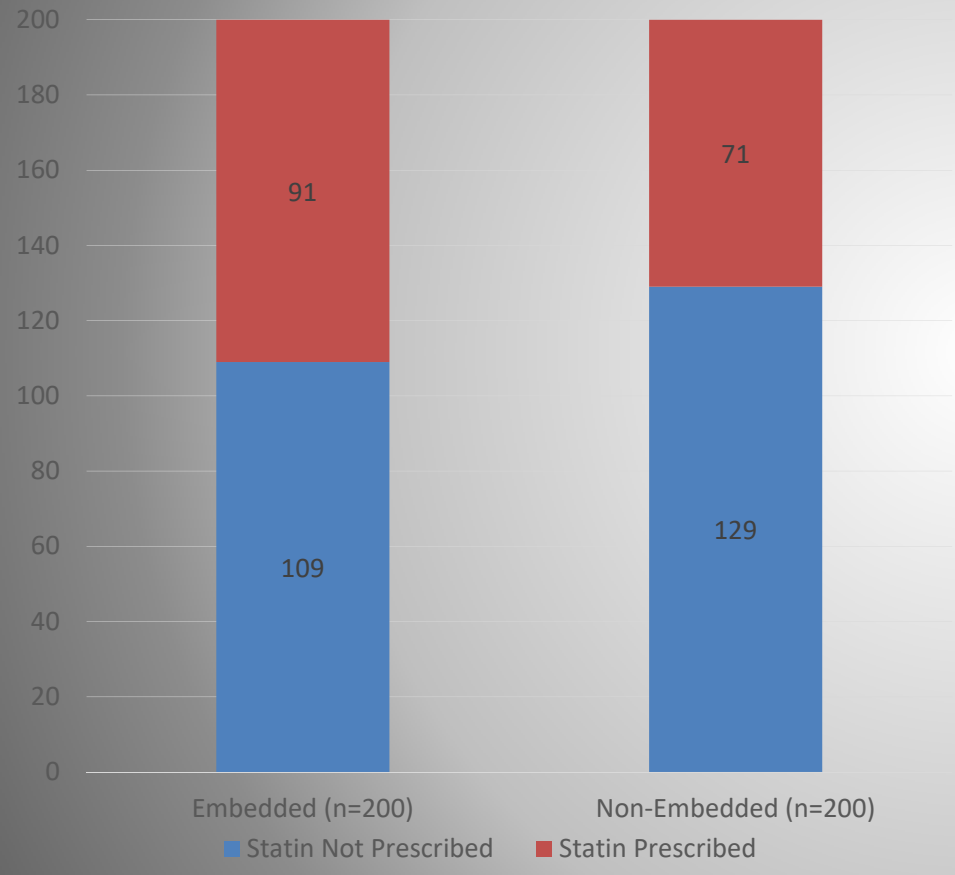

Figure 2: Non-Embedded Recommendations

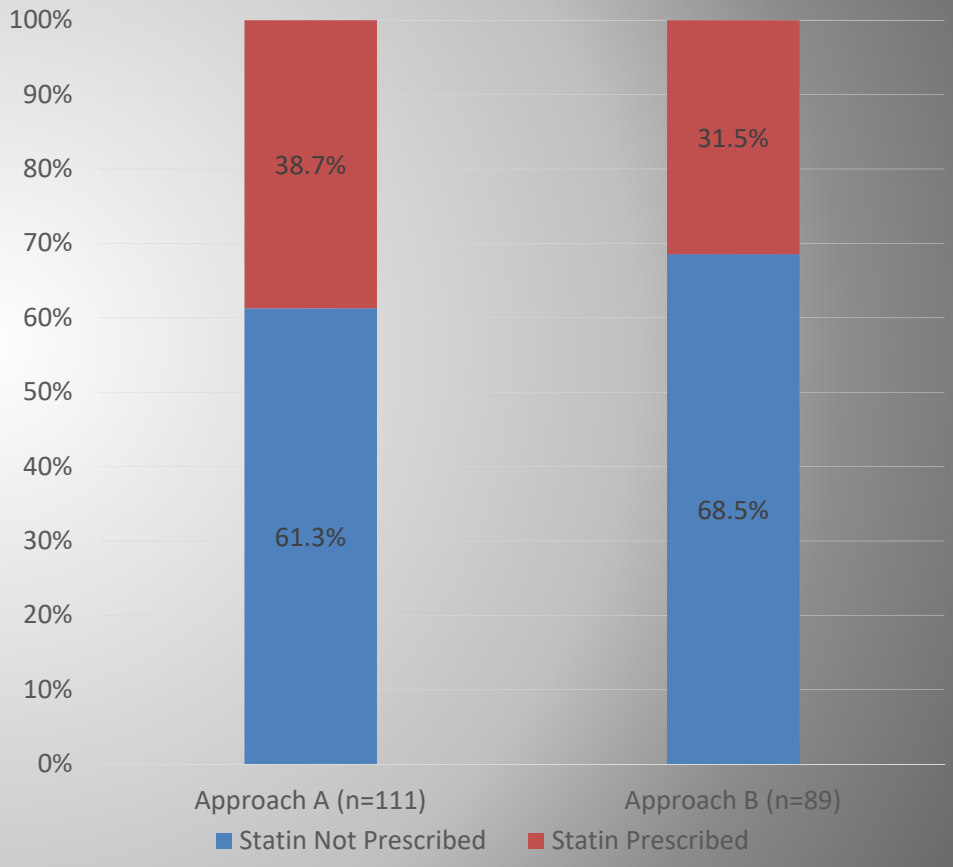

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Figure 3: Initiated Statin Recommendation (N=162) Provided By:

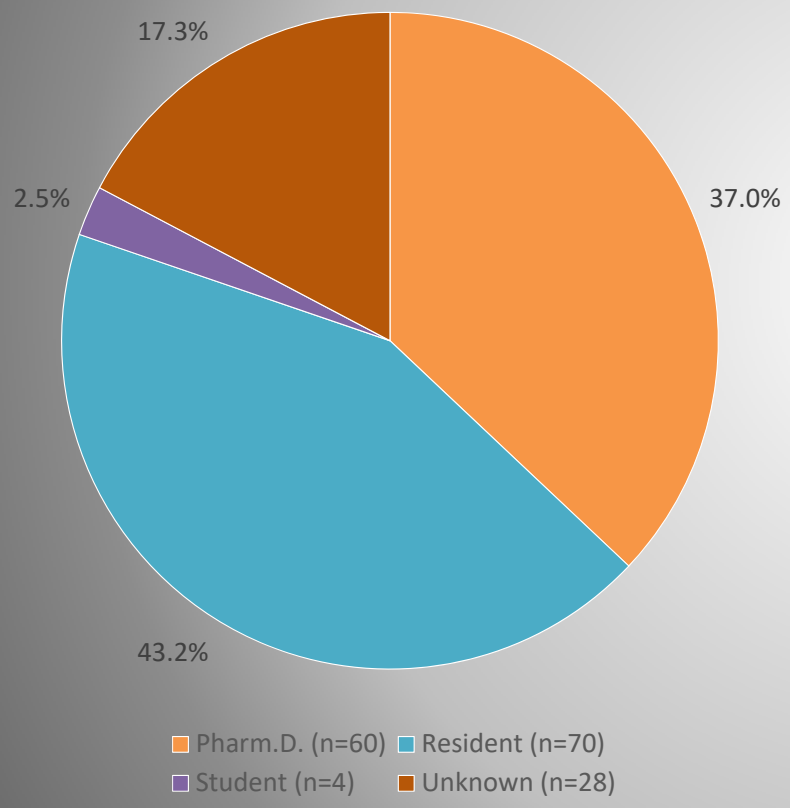

Figure 4: Rational Why Statin Not Prescribed-- All Cohorts (N=238)